

REMARKS

The above Amendments and these Remarks are submitted under 35 U.S.C. § 132 and 37 C.F.R. §§ 1.111 and 1.114 in response to the Office Action mailed September 6, 2006.

Summary of the Examiner's Action and Applicants' Response

The Examiner has stated that Claim 3 would be allowed if it is rewritten in independent form. The Examiner has again rejected Claims 1, 2, and 4-17 under 35 U.S.C. §102(b) as being anticipated by Bloom, (U.S. Patent No. 5,726,615). Applicants respectfully traverse the rejection.

In this amendment, Applicants have amended Claims 1-3, 11-13, and 17. New Claim 18 has been added. After entry of this amendment, Claims 1-18 will be pending.

Applicants very much thank the Examiner for the time he has taken from his busy schedule to consider our proposed amendments and for his valuable insights during telephonic interviews with Applicants' counsel on February 5, 2007.

Response to the Rejection of Claims 1, 2, and 4-17 under 35 U.S.C. § 102(b)

The Examiner has again rejected Claims 1, 2, and 4-17 under 35 U.S.C. 102(b) as being anticipated by Bloom. The Examiner stated in response to Applicants' argument that he considers "at the final product of Bloom in its broadest means, that the layers 58a and 58f are attached to the outer surfaces of the circuit board, wherein the circuit board is defined as a multilayer circuit board having any other layers excluding the layers 58a and 58f. Applicants should be noted that in interpreting a multilayer circuit board, any stack of layers could be considered as a circuit board and any layer outside the predefined circuit board is properly considered as attached to the surfaces of the circuit board."

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." M.P.E.P. § 2131 citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." M.P.E.P. § 2131 citing *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Applicants have amended Claims 1 and 17 to make the differences between the claimed invention and the teachings in Bloom more clear. More specifically, Applicants have amended

Claims 1 and 17 to delete mention of "multi-layer PCB" from the preamble and associate this phrase with the word "stack" in order to emphasize that the stack is a multi-layer PCB to which the two free standing (i.e., separate) conductive layers are attached. Regarding these conductive layers, the term "free standing" has been changed to "separate". Applicants note that "separate" is a term suggested by the Examiner for this element during one of the interviews with Applicants' counsel on February 6, 2007. Applicants respectfully submit that Bloom discloses conductive traces referred to as windings 58a-58f. Applicants respectfully submit that Bloom does not teach or suggest conductive traces or windings which are **separate conductive layers** as claimed in Claims 1 and 17. (See, e.g., FIG. 8A-78C and Col. 7, lines 24-48). Further, Bloom does not teach that 58a-58f are **separate conductive layers**, as claimed in Claims 1 and 17, but instead teaches that 58a-58f are **conductive traces formed on corresponding insulating layers of a winding disk** (e.g., FIGs. 1A, 6A, and 6B) or of a double-sided PCB (e.g. FIGs. 8A-8C).

Applicants respectfully submit that an advantage of including **separate** conductive layers is that the cost of each of these separate conductive layers is much less than the cost of forming two additional conductive traces on additional PCBs and then adding these assemblies to a multi-layer PCB assembly. Applicants respectfully submit further that there is a significant cost savings when a separate conductive layer is used as one turn of the winding. (See paragraph [0047] of the specification).

Applicants have also amended Claim 1 to include the limitation in Claim 2 that a first one of the conductive traces is formed on the top surface of the multi-layer PCB stack and a second one of the conductive traces is formed on the bottom surface of the PCB stack in order to make the differences between the claimed invention and the teachings in Bloom even more clear.

For all of the above reasons, Applicants respectfully submit that each and every element as set forth in Claims 1 and 17 is not found, either expressly or inherently described, in Bloom. Applicants respectfully submit, therefore, that Claims 1 and 17 are not anticipated by Bloom.

Claims 2-16 depend directly or indirectly from Claim 1, and thus are respectfully submitted as not being anticipated by Bloom for the same reasons as above for Claim 1, as amended.

Claim 4 recites that each conductive layer is a metal foil. Applicants have added a new claim, Claim 18, that depends from Claim 4 and includes the limitation that the metal foil has a thickness that is greater than the thickness of each of the conductive traces of the multi-layer PCB

stack. Claim 18 depends directly or indirectly from Claim 1, and thus is respectfully submitted as not being anticipated by Bloom for the same reasons as above for Claim 1, as amended. Further, Applicants respectfully submit that the combination of a separate metal foil and PCB traces creates a lower resistance than PCB traces alone. (See e.g., paragraphs [0007], [0008], and [0046]). Since the temperature of a winding generally increases with resistance, Applicants respectfully submit, therefore, that the additional metal foils allow the component to operate at a reduced temperature for a given current, or to accept a larger current with the same temperature increase, thus increasing efficiency compared to a structure having just PCB conductive trace windings. (See e.g., paragraph [0046] and FIG. 6). For these additional reasons, Applicants respectfully submit that Claim 18 is not anticipated by Bloom.

Claim 11 includes an insulator disposed between the top conductive trace and the first conductive layers. Applicants have amended Claim 11 to state that the insulator is also separate, i.e., free standing, from any other structure. Applicants respectfully submit further that Bloom does not disclose a separate insulator positioned between a top conductive trace on a PCB and a separate first conductive layer, as claimed in Claim 11.

Conclusion

For the above reasons, Applicants respectfully submit that Claims 1-18 in the present application are allowable. Such allowance is respectfully solicited.

If a telephone conference would expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (415) 984-8200.

Respectfully submitted,


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